



Body System: Cardiovascular		
Session Topic: Syncope		
Educational Format		Faculty Expertise Required
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
Professional Practice Gap	Learning Objective(s) that will close the gap and meet the need	Outcome Being Measured
<ul style="list-style-type: none"> As patients over the age of 70 are most likely to experience at least one episode of syncope, family physicians should be prepared to treat them as the population continues to age. Family physicians need to be prepared to diagnose certain underlying conditions that may be evidence of cardiovascular problems. Family physicians should be able to construct a differential diagnosis of syncope in order to classify it into one of four categories (reflex-mediated, cardiac, orthostatic and cerebrovascular). Family physicians need to know what to do for patients with syncope whose ECG and cardiac tests are normal 	<ol style="list-style-type: none"> Evaluate patients who present with syncope to determine cardiac or non-cardiac causes. Prepare diagnostic plans for patients who present with neurocardiogenic forms of syncope, which may include conducting a differential diagnosis of syncope. Conduct appropriate tests, such as ECGs, exercise stress testing, tilt tests or blood screenings, to diagnose underlying conditions in patients whose ECGs and cardiac tests are normal. 	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



<ul style="list-style-type: none"> Family physicians should be prepared to coordinate care for patients who require referral for specialized testing and treatment. 			
ACGME Core Competencies Addressed (select all that apply)			
X	Medical Knowledge		Patient Care
	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism		Systems-Based Practice
Faculty Instructional Goals			
<p>Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.</p> <ul style="list-style-type: none"> Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations Facilitate learner engagement during the session Address related practice barriers to foster optimal patient management Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the <u>References</u> section below are a good place to start <ul style="list-style-type: none"> Visit http://www.aafp.org/journals for additional resources Visit http://familydoctor.org for patient education and resources Provide specific examples to differentiate the application of current evidence-based guidelines. Provide specific examples and strategies to help physicians efficiently evaluate patients presenting with syncope, and minimize the ordering of unnecessary tests. Provide specific examples of guideline application for patients presenting to emergency rooms who have experienced syncope. Provide recommendations regarding guidelines for Medicare reimbursement. Provide recommendations to maximize office efficiency and guideline adherence to the diagnosis and management of syncope. Provide an overview of newly available treatments, including efficacy, safety, contraindications, and cost/benefit relative to existing treatments. Provide instructions regarding the incorporation and use of the PCMH/ACO/Primary Care Core Measure Set into practice. 			

Needs Assessment

Syncope is a condition characterized by a temporary, or transient loss of consciousness, usually due to a sudden drop in blood pressure or interrupted blood flow to the brain. It can be caused by



a number of cardiac, neurologic or other factors, including emotional and physical stress, overheating, dehydration, heavy sweating or exhaustion; although the condition is often benign, it can serve as an indication of a dangerous underlying heart condition in some patients.^{1,2} Syncope affects one million Americans each year and accounts for 3% of all emergency department visits and 6% of all hospital visits.^{1,3} More than 75% of patients over the age of 70 will experience an episode of syncope at least once.

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians have a significant and meaningful gap in knowledge and skills to evaluate and manage patients who suffer from syncope.⁴ More specifically, CME outcomes data from 2012-2016 AAFP FMX (formerly Assembly): *Syncope* sessions suggest that physicians have knowledge and practice gaps with regard to ordering appropriate diagnostic tests; taking an adequate history and more detailed physical exam; risk stratification and recognizing when to refer; increased awareness of Brugada syndrome; and more effective use of ECG.⁵⁻⁹

Cardiac factors that cause syncope are usually related to a temporary reduction of blood flow to the brain that occurs if there's an obstruction of blood flow out of the heart; this may be due to certain arrhythmias (such as bradyarrhythmia or tachyarrhythmia) or aortic stenosis. Neurologic factors linked to syncope most often include seizures and stroke, although vasomotor syncope (such as orthostatic hypotension) is also considered a “noncardiac” type of syncope. A third type, neurocardiogenic syncope (also known as reflex or neurally mediated syncope), is the most common cause of syncope in the general population.² It tends to occur when a person is exposed to some sort of stimulus, such as prolonged standing, that causes a large proportion of blood to pool in the legs, thus causing blood pressure to fall and leading to a lack of blood flow to the brain.¹ Although the cause of syncope remains unexplained in 40% of episodes,² syncope can be averted in many cases for people who experience recurrent episodes by recognizing the warning signs (i.e., dizziness, nausea, sweating) and lying down, or using assistive devices such as canes and walkers (particularly in elderly patients).

All patients who present to an emergency department or office visit (even those with “presyncope,” or episodes of extreme dizziness but not a loss of consciousness) should be thoroughly evaluated with a careful history and physical exam, including an electrocardiogram (ECG), particularly if an underlying heart condition is suspected to identify patients with life-threatening conditions and those with red flags indicating an increased risk of sudden death.¹⁰ Physicians must identify patients with life-threatening conditions who require hospital admission. However, the initial evaluation may not indicate a clear etiology. Rather than determining a specific diagnosis, the physician should implement risk stratification similar to that of chest pain evaluation.¹¹ Cardiac causes of syncope are associated with significantly higher rates of morbidity and mortality than other causes.³ Physicians should conduct a careful assessment of the patient's history, including past episodes of syncope, evidence of arrhythmias and a risk factor analysis (such as age, low blood pressure and a history of congestive heart failure).¹² Medications currently being taken should also be considered to evaluate the risk for polypharmacy and ensure that certain medications (such as Class IA and IC antiarrhythmic drugs) are not causing syncope.² A differential diagnosis should be conducted to classify the syncope into one of four categories – reflex-mediated, cardiac, orthostatic and cerebrovascular –



which helps to identify underlying causes. In situations in which the history, physical exam and ECG tests are normal, a more thorough screening is typically required, for which family physicians may choose to refer or conduct themselves.³

Family physicians may consider cardiac tests in patients with syncope to diagnose underlying cardiovascular conditions (such as CAD), to evaluate their heart's ability to withstand physical exertion and stress and to evaluate them prior to surgery, if necessary. While some tests (such as ECGs and exercise stress tests) may be performed in their practice, others (such as cardiac Computed Tomography or other more invasive procedures, including cardiac catheterization) may need to be referred to sub-specialists. Nonetheless, family physicians must be prepared to order or perform the most appropriate screening test with the most accurate information in a timely and cost-effective manner, especially in rural or underserved areas or emergency settings where resources and providers may be limited. In determining which type of test is most appropriate for patients, all physicians should consider the sensitivity and specificity of available tests, as well as their positive and negative predictive values, to correctly diagnose the patient with – or without – a given disease or condition.¹³

When identifying appropriate cardiac tests, family physicians should also take patient selection criteria into account, which includes age, gender, presence of cardiovascular disease or comorbidities, risk factors and, for some specific tests, the patient's ventricular function and physical stress (or exercise) tolerance.^{14,15} It is important for physicians to note that not every diagnostic test is appropriate for every patient, as it may yield a false positive or lead to an unnecessary procedure. Because the performance of many cardiac tests falls outside the scope of practice for family physicians in some settings, they must be prepared to coordinate the testing, evaluation and/or treatment for the patient, which often requires consultation with a sub-specialist, interpretation of test results and monitoring compliance with treatment or follow-up care. Patients who are referred to sub-specialists for enhanced evaluation or treatment still retain a family physician's practice as their "medical home," and as such, the coordination of care can and should be provided by their family physician.

Physicians may improve their care of patients with syncope by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:¹⁶⁻¹⁸

- Patients who present with presyncope should be evaluated similarly to those who present with syncope.
- Patients with syncope and evidence of congestive heart failure or structural heart disease, abnormal electrocardiographic findings, or a family history of sudden death should be admitted to the hospital for emergent evaluation.
- Patients presenting with syncope should have orthostatic blood pressure measurements and standard 12-lead electrocardiography.
- Laboratory and imaging studies should be ordered for patients with syncope only if clinically indicated by the history and physical examination.
- Implantable loop recorders increase diagnostic yield, reduce time to diagnosis, and are cost-effective for suspected cardiac syncope and unexplained syncope.
- Patients with syncope who are at low risk of adverse events (e.g., those with symptoms consistent with vasovagal or orthostatic hypotension syncope, no history of heart disease,



no family history of sudden cardiac death, and normal electrocardiographic findings) may be safely followed without further intervention or treatment.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

The American Academy of Family Physicians Academy has participated in the Core Measures Collaborative (the Collaborative) convened by America's Health Insurance Plans (AHIP) since August 2014. The Collaborative is a multi-stakeholder effort working to define core measure sets of various specialties promoting alignment and harmonization of measure use and collection across both public and private payers.

Participants in the Collaborative included Centers for Medicare and Medicaid Services (CMS), the National Quality Forum (NQF), private payers, provider organizations, employers, and patient and consumer groups. This effort exists to decrease physician burden by reducing variability in measure selection, specifications and implementation—making quality measurement more useful and meaningful for consumers, employers, as well as public and private clinicians.

With significant AAFP input, a PCMH/ACO/Primary Care Core Measure Set has been developed for primary care. The goal of this set is to decrease burden and allow for more congruence between payer reporting programs.¹⁹

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Syncope: Evaluation and Differential Diagnosis¹⁷
- Evaluation of Syncope – Recommendations for Practice¹⁵
- Risk Stratification of Patients Presenting with Syncope²⁰
- Guidelines for the diagnosis and management of syncope²¹
- AHA/ACCF Scientific Statement on the evaluation of syncope²
- Clinical policy: critical issues in the evaluation and management of adult patients presenting to the emergency department with syncope¹¹
- Transient loss of consciousness ('blackouts') management in adults and young people²²
- Appropriate and safe use of diagnostic imaging²³
- How to reduce your malpractice risk²⁴
- ICD-10 Coding for the Undiagnosed Problem²⁵
- PCMH/ACO/Primary Care Core Measure Set¹⁹
- Thinking on paper: documenting decision making²⁶
- Simple tools to increase patient satisfaction with the referral²⁷



- Exam documentation: charting within the guidelines²⁸
- FamilyDoctor.org. Fainting | Overview (patient resource)²⁹

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References

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